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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/902,709 | 07/12/2001 | Raymond Buckshaw | 01730019AA | 1540 |
| 34610 | 7590 | 11/10/2004 | EXAMINER | |
| FLESHNER & KIM, LLP P.O. BOX 221200 CHANTILLY, VA 20153 | | | ASSOUAD, PATRICK J | |
| | | | ART UNIT | PAPER NUMBER |
| | | | 2857 | |
| DATE MAILED: 11/10/2004 | | | | |

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/902,709

Applicant(s)

BUCKSHAW, RAYMOND

Examiner

Patrick J. Assouad

Art Unit

2857

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on 06 October 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) 15-17 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 18-25 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☒ Claim(s) 1-25 are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 12 July 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Election/Restrictions

1. Claims 15-17 are withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention, there being no allowable generic or linking claim. Election was made **without** traverse in the reply filed on 10/6/04.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

4. Claims 1-14 and 18-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over **the admitted prior art** (or admitted "conventional methods") in view of **Werneke** ("A Satellite Monitoring System", Digital Satellite Communications, Tenth International Conference, 15-19 May 1995).

Art Unit: 2857

5. Applicant states on pg. 2 of his Specification:

Conventional methods for measuring EIRP power involve a large number of steps, most of which are manually performed by a technician. These methods first require the technician to access a computer system (Transponder View) containing customer information. From this system, the technician would write down notes indicating the location on the transponder as well as other operational information. The technician would then manually input other information (e.g., frequency, span, reference level) into a spectrum analyzer using a panel keypad on the front of the instrument. Using the spectrum analyzer, the technician measures the bandwidth of a modulated RF carrier signal received from a satellite downlink (typically, at the 3 db points) and then the power level of the carrier signal as compared with a reference carrier, usually 10 dbw in strength.

After taking these measurements, the technician inputs them into a Visual Basic program (known as "SCPC Power") to achieve a calculated power reading of the modulated data carrier. The measured and calculated power readings are then compared to the contracted information from Transponder View computer system. From this comparison, problems associated with the satellite downlink are determined and subsequently addressed. From this comparison, the technician Zso determines if the customer's carrier is operating at the proper level. If the customer's carrier is operating at an excessive level in a power-shared transponder, other carriers handled by the transponder could be compressed or otherwise degraded. The customer may also experience degraded service because the carriers operating at too low of a power level.

6. Applicant then basically states the difference between **the admitted prior art** or conventional EIRP power measurement method and his instant claimed invention, on pg. 3:

There are at least three drawbacks to the conventional methods discussed above. First, these methods require a large number of steps and many of them are manually performed. This makes the measurement process time inefficient and the substantial involvement of a technician increases costs and introduces the possibility of human error. Second, the conventional methods require the use of separate hardware components, each of which must be manually operated by the technician. This further increases costs and inefficiencies. Third, conventional methods require the use of separate computer programs implemented at different stages of the measurement-taking process. For example, one program is embodied within the Transponder View computer system which a technician must initially access to obtain customer information. Another program is the Visual Basic program which the technician uses to obtain calculated power measurement readings. Using separate programs of this type further increases costs and inefficiencies. Also, the presence of a technician is a necessity because none of these programs "talk" to one another. From the foregoing discussion, it is apparent that a need exists for a method of the measuring power of a satellite downlink carrier signal which is faster and more efficient than conventional methods.

7. In other words, the basic difference between **the admitted prior art** and the instant claimed invention is: the measurement, determination, and calculations of EIRP are automatically performed under control of a computer program, rather than involving known manual steps performed by a technician.

8. **Werneke** discloses a satellite monitoring system. More particularly, he states:

COMSAT World Systems (CWS) has built an automated satellite monitoring system with monitoring sites in the United States, Europe, and Japan. This system monitors the downlinks of carriers originating in the U.S. or destined for U.S. users of the INTELSAT system abroad. The areas of coverage include the Atlantic and Pacific ocean regions. The monitoring system examines the RF properties of the various carriers (power, frequency, and bandwidth) in addition to the quantitative carrier parameters (effective isotropically radiated power, carrier-plus-noise power to noise-power ratio, carrier power to noise power ratio, energy-per-bit to noise-power density ratio, and so on). This paper presents a general description of the system, followed by descriptions of the network and control system architectures and a discussion of system operations.

9. And later **Werneke** states:

SYSTEM DESCRIPTION

The SMS comprises a suite of test equipment, located at various earth stations throughout the world, and a central control computer located at COMSAT's headquarters in Bethesda, Maryland U.S.A. The central control computer uses specialized software to remotely control the equipment in the SMS network.

The basic functions of the SMS can be divided into three categories: monitoring, calibrating, and testing. The monitoring function includes carrier and transponder power, and bandwidth and center frequency measurements, as well as the computation of quantitative parameters such as effective isotropically radiated power (EIRP), carrier-to-noise ratio (C/N), carrier-plus-noise to noise ratio ($C+N/N$), energy-per-bit to noise-power density ratio (E_b/N_o), and signal-to-noise ratio (S/N). The monitoring equipment is controlled using a sophisticated software package called SATMON (1), which provides the operator with a virtual instrument interface. Using the SATMON software, the operator can manually or automatically monitor carrier/transponder power, center frequency, and bandwidth. Should a particular carrier or transponder deviate beyond acceptable limits for any one of these parameters, the SMS software will inform the operator through an alarm.

A selected set of carriers and transponders can be monitored automatically after being entered into the SATMON database. The SATMON software configures the appropriate equipment based on the characteristics of the carrier or transponder being monitored and the characteristics of the monitoring earth station. It computes the quantitative parameters associated with each carrier and determines the maximum, minimum, mean, and standard deviation for these and the measured (power center frequency bandwidth) parameters. These parameters are stored in a database and can be recalled and placed in various reports. The maximum, minimum, mean, and standard deviation values can be listed or plotted over time for trend analysis.

10. In other words, **Werneke** describes an *automatic method and system* for measuring EIRP power of a satellite downlink carrier performed under control of a computer program. Thus, it would have been obvious to one having ordinary skill in the art at the time the invention was made to apply the "automatic" or "computerized" teachings of **Werneke** to the **admitted prior art** (or conventional method) of measuring EIRP power of a satellite downlink carrier signal, because such a combination relieves an operator of the many known laborious and tedious steps involved, and thus the performance of satellite communications systems may be monitored in real-time to verify that customers expectations of proper satellite power levels are being met.

11. As to the claimed computer program code sections, storage device, display device, database, processor, etc., all computer-controlled systems require computer code, a processor to run the code, a storage device, and some database of requisite data to process and retrieve data from. Also see at least the block diagrams of Figs. 2-3 and 5 of **Werneke**.

12. As per dependent claims 2-14, 19-23, and 25, these are believed to be either in **the admitted prior art** or inherent in **the admitted prior art** of EIRP power measurements.

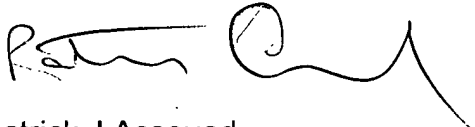
Conclusion

13. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Most notable are the various web pages from www.sat.com (the Sat Corporation's website) which is referred to in the **Werneke** article used in the above rejection.

14. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Patrick J. Assouad whose telephone number is 571-272-2210. The examiner can normally be reached on Tuesday-Friday, 6:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Marc Hoff can be reached on 571-272-2216. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Patrick J Assouad
Primary Examiner
Art Unit 2857

pja